

WHAT IS CLAIMED IS:

1. A multichip module comprising a plurality of semiconductor
5 chips mounted on said multichip module, wherein each said plurality of
semiconductor chips includes at least a plurality of input/output cells
connected to a plurality of respective external terminals of the multichip
module, and testing means for optionally setting states of said plurality of
input/output cells.

10 2. The multichip module according to claim 1, wherein said test
means controls all the states of said plurality of input/output cells that are
commonly connected to the same external terminals.

15 3. The multichip module according to claim 1, wherein said test
means controls all the states of said plurality of input/output cells of the
semiconductor chips.

20 4. The multichip module according to any of claims 1 to 3,
wherein said test means includes:

a first sets of plural flip-flops of which configuration is based on that
of a shift register, ;

a second sets of plural flip-flops of which inputs are connected to
corresponding outputs of the first sets of plural flip-flops; and

25 a selector for selecting a normal signal in a non-test mode, while
selecting an output from the second sets of flip-flops in a test mode, so as to
give an input/output control signal to said plurality of input/output cells.

30 5. A multichip module comprising a plurality of semiconductor
chips mounted on said multichip module, wherein each said plurality of
semiconductor chips includes at least a plurality of input/output cells

connected to a plurality of respective external terminals of the multichip module with being subjected to a boundary scan design, and boundary scan means mounted on said plurality of semiconductor chips for optionally setting states of said plurality of input/output cells.

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6. A multichip module testing method of carrying out a burn-in test for the multichip module which is provided with a plurality of semiconductor chips thereon, each being provided with at least a plurality of input/output cells connected to a respective plurality of external terminals of the multichip module input/output cell, comprising the steps of:

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toggling an input/output control signal to one of said plurality of input/output cells connected to one of said plurality of external terminals which is not shared by said plurality of semiconductor chips; and

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toggling an input/output control signal with exclusively controlling a state thereof, said respective plurality of external terminals being shared by said plurality of semiconductor chips.